Motorcycle Accident Prevention

POV Operations – Motorcycles

POTENTIAL RISKS

- ***Aggressive motorcycle operation***
- ***Speed – Misuse of High-Performance Bikes***
- ***Failure to Maintain Proper Position in Lane or Adequate Following Distance.***
- ***Limited Detection by Other Motorists***

- Potential Results -

- **Degradation of combat power due to accidental injury and/or death**

MITIGATING MEASURES

- ***Leader Engagement, Raise Awareness thru NCOPD risk sessions***
- ***Leader counseling for riders***
- ***Identify High Risk Drivers***
- ***Enforce the Use of Proper PPE***
- ***Installation/state motorcycle safety training.***
- ***Verify, proper training, licensing, registration, insurance and condition of motorcycle.***

Fatal Accidents

10 Apr 05, 0021, Soldier operating a motorcycle at 60-70 mph lost control and was thrown against a concrete barrier. Soldier died on scene of massive head injuries. Helmet worn was not DOT approved.

19 Apr 05, Motorcycle was traveling north on I-5. Vehicle convoy from 296th BSB was moving through the Madigan Gate onto I-5 deploying to YTC. Motorcycle collided with 2nd vehicle in convoy (MTV – B126). Motorcyclist was thrown from the vehicle.

Some Facts

- Traffic crashes are a leading cause of death and disability in the United States.
- Motorcycle crashes claim the lives of over 2,100 riders each year.
- Per mile traveled, motorcyclists are 16 times more likely than passenger car occupants to die in a traffic crash and about four times as likely to be injured.

Some More Facts

- More than 80% of all reported motorcycle crashes result in injury or death to the motorcyclist.

- Head injury is a leading cause of death and serious injury in motorcycle crashes, which is why helmets that meet or exceed federal safety standards should always be worn.

- Research studies show that motorcycle helmets are 29% effective in preventing fatal injuries and 67% effective in preventing serious brain injury.

Crash Prevention Components

- **Preventing crashes before they occur is a key component of a motorcycle safety program. Crash prevention programs focus on four areas:**
  - Education programs
  - Properly licensed motorcycle operators
  - Reducing alcohol and other drug involvement
  - Awareness activities to reach motorists who share the road

Injury Prevention Components

- Clothing
- Eye and face protection
- Footwear
- Gloves
- Helmets
- Reflective Vest or Sash

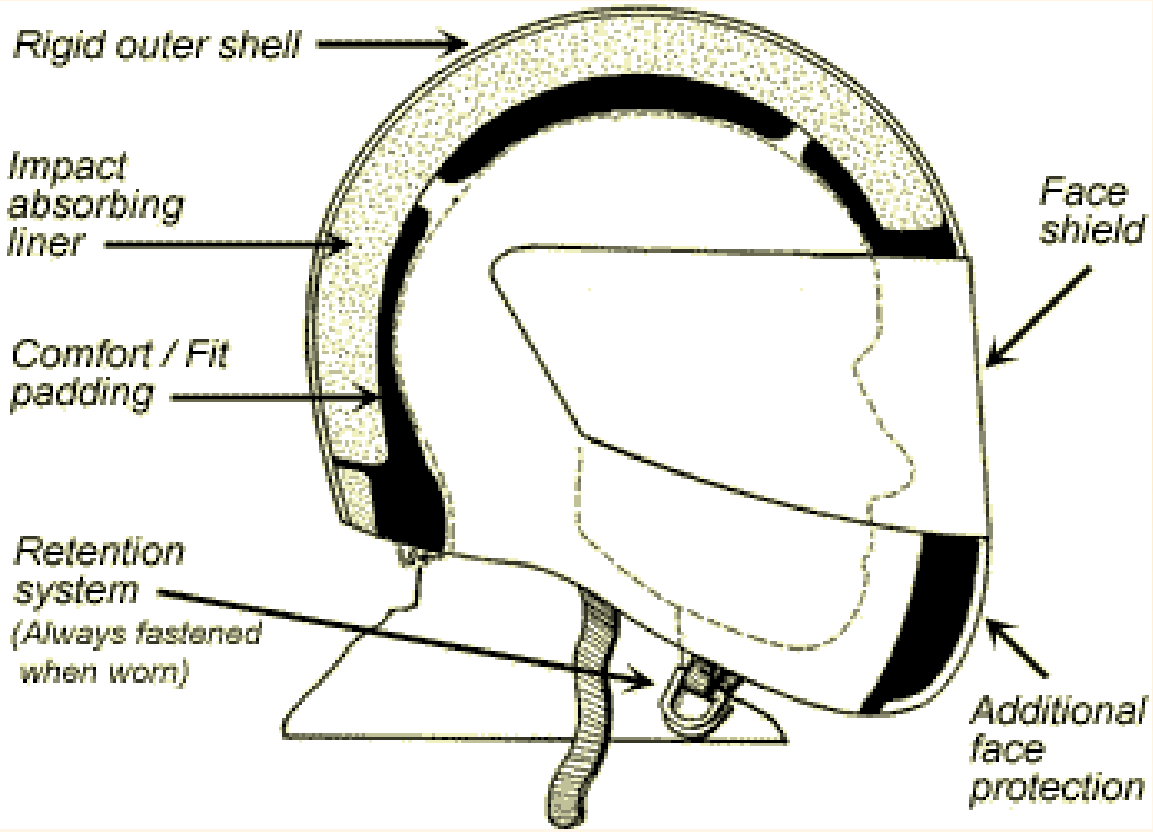
Reflective Wear

Vest	Sash
←Front Back→	

Helmets

- Helmeted riders have up to a 73 % lower fatality rate than unhelmeted riders.
- Helmeted riders have up to an 85 % reduced incidence of severe, serious, and critical injuries than non-helmeted riders.
- Motorcycle helmets are 67 % effective in preventing brain injuries.
- Unhelmeted motorcyclists are over three times as likely to suffer a brain injury as were those who were helmeted.

Anatomy of a Helmet



This only works if you wear it!

Hydroplaning

Hydroplaning is the result of your tires moving FAST across a wet surface - so fast that they do not have sufficient time to channel that moisture away from the center of the tire. The result is that the tire is lifted by the water away from the road and all traction is lost.

Hydroplaning

Key factors in determining at what speed the tire will begin to hydroplane:

- Tread design
- Tread depth
- Weight of motorcycle
- Tire pressure
- Water-Depth and even the consistency

Hydro-planning No-No's

Do NOT apply your brakes

Do NOT try to steer in any direction but straight ahead

Steering

Your front wheel changes course

Your rear wheel maintains course

Braking

- The use of both brakes together will invariably slow you down more quickly than using just one of them.
- The use of both brakes together results in LESS weight transfer than does using just the front one. (Assuming equal total braking force applied.)
- Use of both brakes tends to lengthen the life of your front brakes.
- If you need to stop or slow down on slick or gravel surfaces, the rear brake is just the ticket (in combination with a very gentle hand on the front one.)
- If you are going less than 20 MPH then both brakes are effective (and relatively safe.)
- In very slow maneuvers, the use of the rear brake alone often provides added stability and control of your motorcycle.

Stopping Distance Factors

- Other Bikers and Automobiles
- Terrain and Obstacles
- Wet Road Conditions
- Gravity-Incline vs. Decline
- Lane of Travel with Other Bikes and Autos

The 2 Second Rule

- The '2-second rule' means that in staggered formation there is a ONE second spacing between each bike, thus a TWO second spacing between bikes in the same track.

- The "2-second rule" should constitute your *fundamental safety margin* while riding in a group if you use it as a *minimum* spacing distance.

NOTE: This does not mean it is impossible to hit the guy ahead of you if he loses control of his bike!

Excessive Tire Wear - 7 Causes of Cupping

- Roads that are banked
- Forced speed changes
- Alignment
- Carrying an unevenly divided load
- Setting your TRAC (anti-dive) unequally
- Defective Front Shock
- Excessive use of the front brake

Local Motorcycle Safety Training

- **If you can’t prove completion of an approved course, you can go locally.**
- **Both the basic and advanced courses are available from area vendors ($100).**
- **Safety will pay tuition, if you bring a signed training request (DD form 1556) from the unit/activity to the Safety Office before the training, followed by proof of completion.**
- **You can also enroll on your own for the course and pay the $ out of pocket.**

Required Protective Equipment

- **On Fort Lewis, each motorcycle operator must wear the following while driving a motorcycle on-post:**
  - **Properly fastened Helmet, DOT approved.**
  - **Eye protection (Clear goggles/Face shield).**
  - **Clothing (long sleeve shirt, long pants, and full-fingered gloves).**
  - **High visibility garments (bright color for day and retro-reflective for nights).**
  - **Footwear (over the ankle shoes).**
- **Off-post, the requirements still apply to soldiers both on- and off-duty, and to DACs on-duty.**

In Summary

Be Safe…

- Wear the proper attire.

- WEAR YOUR HELMET!

- Use good driving techniques:

Hydroplaning Prevention

Braking and stopping distance

Steering- Rear Wheel vs. Front Wheel

Be aware of excessive wear on your tires